

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY


(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D. 05 DEC 2005

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Applicant's or agent's file reference PKAUF-001	FOR FURTHER ACTION		See Form PCT/PEA/416
International application No. PCT/BR2004/000190	International filing date (day/month/year) 04.10.2004	Priority date (day/month/year) 08.10.2003	
International Patent Classification (IPC) or national classification and IPC G01S5/14			
Applicant KAUFMANN, Pierre			
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> sent to the applicant and to the International Bureau a total of sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>			
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>			
Date of submission of the demand 05.08.2005		Date of completion of this report 05.12.2005	
Name and mailing address of the International preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016		Authorized Officer Niemeijer, R Telephone No. +31 70 340-1038	



**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/BR2004/000190

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

Description, Pages

1-31 as originally filed

Claims, Numbers

1-33 as originally filed

Drawings, Sheets

1/3-3/3 as originally filed

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/BR2004/000190

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	2-13,15-21,23-33
	No: Claims	1,14,22
Inventive step (IS)	Yes: Claims	13,17,25-32
	No: Claims	1-12,14-16,18-24,33
Industrial applicability (IA)	Yes: Claims	1-33
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Re Item V

**Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

- 1 The following document is referred to in this communication:
D1: US-B1-6 313 790 (CHENG DAVID C ET AL) 6 November 2001 (2001-11-06)
- 2 Applicant has submitted arguments against novelty of D1, in which it is stated that the solution in D1 cannot obtain a tetrahedron. In fact, the solution in D1 is based on determining the lateral edges a_1 , a_2 and a_3 of a tetrahedron which is defined by its vertices R_1 , R_2 , R_3 (fixed base stations) and R_0 (satellite). Other than "to calculate ... lateral edges", the subject-matter of claim 1 does not contain any further technical features on how the positions are derived using these "lateral edges". Therefore claim 1 is not novel over D1.
- 3 INDEPENDENT CLAIMS 1,22
 - 3.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 1 and 22 is not new in the sense of Article 33(2) PCT.
 - 3.2 Document D1 discloses a space positioning system, comprising (the references in parentheses applying to this document):
 - i. a first, a second, and a third base, which are fixed in relation to the earth, but spaced away and disaligned in relation to each other and each having a previously known location (D1: Figure 1, R_1 , R_2 and R_3 ; column 3, lines 7-13);
 - ii. a space platform, visible from the fixed bases and which moves to successive positions, as a function of time, according to a trajectory that is inclined in relation to the rotation axis of the earth (D1: Figure 1, satellite 12; column 4, lines 27-29);
 - iii. a transmitter, operatively associated with each of the parts defined by the fixed bases and the space platform in order to emit pulses in a determined frequency,

- each pulse in a predetermined reference instant (D1: column 3, lines 45-50);
- iv. a receiver operatively associated with each fixed base and with the transmitter, in order to receive said pulses in a trajectory covering the distance between the space platform and the fixed base associated with the receiver (D1: column 3, line 52); and
- v. a control unit which is operatively connected to both the transmitter and the receiver, in order to calculate, for each pulse emission instant, the lateral edges of a tetrahedron (D1: lateral edges are a_1 , a_2 , a_3 ; see column 5, lines 43-53; **see point 2 above**), whose vertices are defined by the three fixed bases and by the space platform (D1: vertices are R_0 , R_1 , R_2 and R_3 ; column 3, lines 19-21), based upon the determination of the propagation time of each pulse, in said trajectory, between the space platform and each fixed base (D1: column 3, lines 55-61) in order to allow determining a respective extension of the trajectory of the space platform, while the latter is visible by the fixed bases (D1: column 6, line 65 - column 11, line 44).

The subject-matter of independent claim 1 is therefore not new..

3.3 The objections set out in point 3.2 apply, mutatis mutandis, to corresponding independent process claim 22.

4 DEPENDENT CLAIMS 2-12, 14-16, 18-21, 23, 24, 33

Dependent claims 2-12, 14-16, 18-21, 23, 24, 33 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step (Article 33(2) and (3) PCT).